

BEFORE
THE PUBLIC SERVICE COMMISSION OF
SOUTH CAROLINA

DOCKET NO. 2000-366-A – ORDER NO. 2001-499

JUNE 1, 2001

IN RE: Application of Chem-Nuclear Systems, LLC)
for Approval of Allowable Costs.) ORDER IDENTIFYING
ALLOWABLE COSTS

I. INTRODUCTION

This matter comes before the Public Service Commission of South Carolina (the Commission) on the Application of Chem-Nuclear Systems, LLC (Chem-Nuclear or the Company) on a proceeding for approval of allowable costs as required under the provisions of the Atlantic Interstate Low-Level Radioactive Waste Compact Implementation Act (the Act), codified as S.C. Code Ann. Section 48-46-10 et seq. (Supp. 2000). Pursuant to Section 48-46-40(B), this Commission is authorized and directed to identify allowable costs for operating a regional low-level radioactive waste disposal facility in South Carolina.

The Act became effective on June 6, 2000. This proceeding is the first one that the Commission has conducted pursuant to the terms of the Act.

The provisions of the Act extensively govern the relationship between the State of South Carolina and operators of facilities for the disposal of low-level radioactive waste in a comprehensive economic regulatory program. Fundamentally, the Act implements the State's membership in the "Atlantic Low-Level Radioactive Waste Compact" (the Compact) and authorizes the manner in which the State will participate in the Compact,

along with the States of Connecticut and New Jersey, which are the other members of the Compact. S.C. Code Ann. § 48-46-20 (Supp. 2000). The Atlantic Compact Act establishes a schedule of declining annual, maximum volumes of low-level radioactive waste from generators in states within and without the Compact to be disposed at the facility within South Carolina. S.C. Code Ann. § 48-46-40(A)(6)(a) (Supp. 2000). The Act provides for the establishment of rates for the disposal of waste within South Carolina, establishes certain fees for various purposes, and makes disposition of revenues generated by the disposal operations of facilities subject to the provisions of the Act.

Among other things, the Act imposes a form of shared responsibility for economic regulation between the Budget and Control Board (the Board) and the Commission. The Board sets the rates for disposal of low-level radioactive waste at any facility located in South Carolina. S.C. Code Ann. § 48-46-40(A) (Supp. 2000). Upon the Board's implementation of initial disposal rates, the Commission is authorized and directed to identify "allowable costs" for operating a regional low-level radioactive waste disposal facility in the State. S.C. Code Ann. § 48-46-40(B)(1). In fulfilling that responsibility, the Commission must (a) prescribe a system of accounts, using generally accepted accounting principles ("GAAP"), using an operator's existing accounting system as the "starting point"; (b) audit site operators' books and records associated with disposal operations; (c) assess penalties for failures to comply with the Commission's applicable regulations; and (d) require periodic reports from site operators. S.C. Code Ann. § 48-46-40(B)(2) (Supp. 2000).

The Act defines “allowable costs” as those “costs to a disposal site operator of operating a regional disposal facility.” S.C. Code Ann. § 48-46-30(1) (Supp. 2000). In addition to that definition, the Act specifies that “[a]llowable costs include the costs of those activities necessary for:

- (a) the receipt of waste;
- (b) the construction of disposal trenches, vaults, and overpacks;
- (c) construction and maintenance of necessary physical facilities;
- (d) the purchase or amortization of necessary equipment;
- (e) purchase of supplies that are consumed in support of waste disposal activities;
- (f) accounting and billing for waste disposal;
- (g) creating and maintaining records related to disposed waste;
- (h) the administrative costs directly associated with disposal operations including, but not limited to, salaries, wages, and employee benefits;
- (i) site surveillance and maintenance required by the State of South Carolina, other than site surveillance and maintenance costs covered by the balance of funds in the decommissioning trust fund or the extended care maintenance fund;
- (j) compliance with the license, lease, and regulatory requirements of all jurisdictional agencies;
- (j) administrative costs associated with collecting the surcharges provided for in subsections (B) and (C) of Section 48-46-60;
- (l) taxes other than income taxes;
- (m) licensing and permitting fees; and
- (n) any other costs directly associated with disposal operations determined by the [Commission] to be allowable.”

The Act also expressly excludes from “allowable costs” the costs of “activities associated with lobbying and public relations, clean-up and remediation activities caused by errors

or accidents in violation of laws, regulations, or violations of the facility operating license or permits, activities of the site operator not directly in support of waste disposal, and other costs determined by the [Commission] to be unallowable.” S.C. Code Ann. § 48-46-40(B)(3) (Supp. 2000).

The Commission may use any standard, formula, method, or theory of valuation reasonably calculated to arrive at the objective of identifying allowable costs associated with waste disposal. S.C. Code Ann. § 48-46-40(B)(8) (Supp. 2000).

The Act entitles a private operator of a regional disposal facility in South Carolina to charge an operating margin of 29%. S.C. Code Ann. § 48-46-40(B)(5) (Supp. 2000). (The present regional disposal facility in South Carolina is located in Barnwell County, South Carolina. The facility shall hereinafter be known as the facility at Barnwell.) The operating margin is applied to the total amount of the operator’s “allowable costs” which the Commission has identified, excluding the “allowable costs” for taxes and the licensing and permitting fees paid to governmental entities (*i.e.*, those “allowable costs” described in Section 48-46-40(B)(3)(l) and (m)). S.C. Code Ann. § 48-46-40(B)(3) (Supp. 2000).

Under the Act, the “allowable costs” and operating margin affect the amount of revenue which a site operator annually pays to the State of South Carolina. Under Section 48-46-40(D)(1), at the conclusion of the fiscal year, a site operator pays to the South Carolina Department of Revenue an amount equal to the total revenues received for waste disposal in that fiscal year (with interest accrued on cash flows in accordance with instructions from the State Treasurer) less its allowable costs, less the statutory 29%

operating margin, and less any payments the site operator had previously made during the fiscal year for reimbursement of certain administrative costs which the Board, the Commission, the State Treasurer and the Atlantic Compact Commission had incurred in satisfaction of those agencies' responsibilities under the Act. *See* S.C. Code Ann. § 48-46-60(B) and (C) (Supp. 2000).

The Act also allows a site operator to file an application for adjustment in the levels of previously identified "allowable costs" or for the identification of "allowable costs" which the Commission had not previously identified. S.C. Code Ann. § 48-46-40(B)(4) (Supp. 2000). The site operator must file such application within 90 days of the conclusion of a fiscal year. If the Commission grants the requested relief in the application, the Act requires the Commission to authorize the site operator "to adjust 'allowable costs' for the current fiscal year so as to compensate the site operator for revenues lost during the previous fiscal year." *Id.*

S.C. Code Ann. Section 48-46-40 (B)(9) identifies certain specific parties to the proceeding. This section of the Act states that the Budget and Control Board shall participate as a party representing the interests of the State of South Carolina, and the Atlantic Compact Commission (the compact commission) may participate as a party representing the interest of the compact states. In addition, the section directs that the Consumer Advocate and the Attorney General of the State of South Carolina (the Attorney General) shall be parties. Further, representatives from the Department of Health and Environmental Control (DHEC) shall participate in proceedings where necessary to determine or define the activities that a site operator must conduct in order

to comply with the regulations and license conditions imposed by the department. The Act also states that other parties may participate in the proceeding upon satisfaction of standing requirements and compliance with the Commission's procedures.

In the present proceeding, the Commission's Executive Director directed the Applicant to publish a Notice of Filing in newspapers of general circulation one time, advising the members of the public of how to participate in the proceedings. The Company furnished affidavits to show that it had complied with the instructions of the Executive Director. Petitions to Intervene in this matter were filed by South Carolina Electric & Gas Company (SCE&G) and Duke Power. Extensive discovery was conducted by the parties in this matter.

A hearing was held beginning on April 9, 2001 in the offices of the Commission. The Honorable William Saunders, Chairman, presided. Chem-Nuclear was represented by Robert T. Bockman, Esquire and Sally Rogers, Esquire. The Board was represented by Kevin A. Hall, Esquire, Reginald I. Lloyd, Esquire, and Jennifer M. Rawl, Esquire. The Consumer Advocate was represented by Philip T. Porter, Esquire, Nancy V. Coombs, Esquire, and Hana Pokorna-Williamson, Esquire. The Attorney General did not appear at the hearing. DHEC was represented by Samuel L. Finklea, Esquire. The Atlantic Compact Commission was represented by Frank R. Ellerbe, III, Esquire. SCE&G was represented by B. Craig Collins, Esquire. Duke Power was represented by William F. Austin, Esquire and Richard L. Whitt, Esquire. The Commission Staff (the Staff) was represented by F. David Butler, General Counsel.

Chem-Nuclear presented the testimony of Regan E. Voit, James W. Latham, William B. House, Carol Ann Hurst, Craig T. Bartlett, and Kevin M. Hall. The Board presented the testimony of Representative Joel Lourie, Thomas D. Pietras (who was presented jointly with the compact commission), and Barry C. Bede. The Consumer Advocate presented the testimony of Andrea C. Crane. DHEC presented the testimony of Henry J. Porter. Neither SCE&G, nor Duke Power presented any witnesses. The Staff presented the testimony of William P. Blume and Dr. Robert A. Fjeld.

II. SUMMARY OF TESTIMONY

Regan E. Voit (Tr., Vol. I-II, at 1-166)

Regan E. Voit, Vice-President for Marketing and Strategic Initiatives for Duratek, Inc., the parent Company of Chem-Nuclear, LLC testified. Voit stated that Duratek was in agreement with all but two of the adjustments made by the Commission Staff to the Company's proposed allowable costs. This agreement resulted in a reduction of approximately \$4.2 million from the original application filed by Chem-Nuclear in August, 2000. Voit noted that there were lower than originally estimated expenses and corporate allocations, and that there is a lower amount of waste than anticipated to be received at the Barnwell site of the plant at issue. The present amount of allowable costs requested by the Company in its revised Application is \$9,514,405, exclusive of other statutory allowable costs.

Voit went on to describe the Company's operations of its disposal facility at Barnwell. Voit testified that this facility accepts low-level radioactive wastes. Examples of this waste are gloves, lab coats, tools, filter media used to purify water in nuclear

power plants, and other materials contaminated with small amounts of radioactivity. The facility does not accept high-level radioactive waste, liquid waste, or hazardous chemical waste. Voit gave an overview of Chem-Nuclear's operation of the Barnwell site, and described the expertise of the Company's Staff. Voit also described a trend of increasing disposal costs along with decreasing volumes of waste. Voit also discussed some of the changes that have impacted the operation of the site. In addition, Voit noted that he expects the Barnwell site to process a lower amount of waste and a different mix of waste than seen before in 2000-2001. The actual costs incurred since June 30 are lower than expected, some budgeted costs will not be incurred this fiscal year, and most of the adjustments to allowable cost categories recommended by the Staff were adopted by Chem-Nuclear. Based on the revised Application, approximately 75% of the costs of operating the Barnwell site are fixed costs. Voit noted that, regardless of the volume of waste received in a given period, the fixed costs stay the same. A reduction in allowable costs could jeopardize the health and safety of South Carolina citizens, according to Voit.

Carol Ann Hurst (Tr., Vol. II at 166-225)

Carol Ann Hurst, Controller for Chem-Nuclear's Barnwell disposal operations, also testified. Ms. Hurst stated the Company's agreement with the recommendations of the Commission Staff for allowable costs, except for formal operating rights, office supplies and expenses, and the costs for vault costs, and the trench amortization. The last two categories are related to the difference in expected volumes. Accordingly, Ms. Hurst notes that the Company is claiming \$9,514,405 in total allowable costs, whereas the Staff

calculates the figure to be \$8,366,276, based on 115,000 cubic feet of waste, exclusive of other statutory allowable costs.

James W. Latham (Tr., Vol. II at 226-286)

James W. Latham, Vice-President for Chem-Nuclear's Barnwell operations, presented evidence for the Company also. Latham discussed the disposal site, its regulatory requirements, basic facility operations and security, and community education and communications.

Chem-Nuclear has operated the disposal site since 1971 continuously, with no interruptions. The site is comprised of approximately 235 acres of property owned by the State of South Carolina and leased by Chem-Nuclear from the Budget and Control Board. Of the 235 acres, approximately 102 acres have been used for disposal. Approximately 13 acres remain available for disposal. The remaining 120 acres include buffer zone areas, water basins, ancillary operations, and other areas not appropriate for disposal. Latham notes that approximately 28 million cubic feet of low-level radioactive waste have been received at the disposal site since 1971. The remaining capacity is about 3 million cubic feet.

Latham discussed the qualifications of the employees at the site, describing them as experienced and talented. Latham stated that attracting and retaining high-quality, well-motivated personnel is an integral part of successful, safe and regulatory compliant disposal of low-level radioactive waste.

Chem-Nuclear currently uses three engineered trench designs: Class A trench, Class B/C and a slit-type trench. Latham described the characteristics of the trench types,

and the type of waste to be stored in said trenches. Chem-Nuclear has a comprehensive site inspection and maintenance program to insure trench cap integrity and to maintain proper surface water drainage away from the trenches, according to Latham.

Physical security, including guards and fences, is provided at the Barnwell site. Security systems maintain surveillance 24 hours a day, seven days a week, also according to Latham.

The Company's organization consists of eleven functional teams or business units. The organization also includes checks and balances surrounding a basic operational organization. Latham testified that Chem-Nuclear attempts to keep open the lines of communication with community leaders, residents of the area, and organizations in the area of the disposal site.

Kevin M. Hall (Tr., Vol. III at 357-381)

Kevin M. Hall also testified on behalf of the Company. Hall is an audit engagement partner at KPMG, LLP, an accounting, tax and consulting firm. Hall provided information on the required accounting for costs incurred by GTS Duratek, Inc. in its acquisition of the nuclear services business in June 2000 from Waste Management, Inc. (WMI). The acquisition price was \$68.7 million in cash, including transaction costs. Hall expressed the opinion that Duratek's accounting of the transaction was in accordance with the Accounting Principal Board Opinion No. 16.

Hall testified that Barnwell operating rights met the definition of allowable costs in the enabling statute, when Generally Accepted Accounting Principles (GAAP) are applied.

Craig T. Bartlett (Tr., Vol. III at 382-476)

Craig T. Bartlett, Vice President, Finance and Treasurer of Duratek, testified. Bartlett discussed the details of several categories of costs contained in the Company's exhibits. These are Barnwell Operating Rights, and related amortization, Corporate G&A Allocation, Calculated Fringe, and Insurance Premiums. Bartlett also discussed the nature of the business acquired by Duratek from WMI.

Bartlett testified that Duratek accounted for the acquisition from WMI using the purchase method of accounting. Bartlett also discussed Accounting Principles Board Opinion No. 16 (APB 16). Bartlett stated that GAAP required that companies use APB 16 and its interpretations in accounting for acquisitions of another company.

Bartlett described the Barnwell Operating Rights (the rights) as the collective knowledge and operating experience accumulated over the past 30 years since Chem-Nuclear began operating the Barnwell site in 1971. More specifically, the rights represent the body of knowledge in environmental safety and health, radiological protection and controls, site engineering, laboratory testing and records, and site survey, sampling and monitoring, as specifically related to the operations of the Barnwell site. According to Bartlett, this unique technical expertise is manifested in an expertly trained, in-place workforce that has achieved an unparalleled safety and compliance record, as well as a customer base which places a very high value on those attributes when searching for vendors to handle their radioactive waste disposal needs in the most safe, compliant and cost effective manner possible. GAAP classifies the operating rights as an intangible

asset. Using a particular described methodology, Bartlett testified that the fair value of the Barnwell Operating Rights was \$7,340,000.

This was determined first by projecting future cash flows for the Barnwell site operations for the 8-year period ending after fiscal year 2008. The projections were based on the declining maximum waste volumes to be received over each of the eight years and Duratek's reimbursement of allowable costs, plus a fixed operating margin of 29%. The present value of the future cash flows was then calculated using a discount rate of 15%. Bartlett noted that the 15% discount rate is the expected weighted average cost of capital for Duratek. The present value of the future cash flows discounted at a rate of 15% for the eight year period equals a value of \$10,140,759. From this amount, the value of the tangible property, plant and equipment for the Barnwell site operations is deducted to determine the net value for the Barnwell Operating Rights. At June 8, 2000, the net book value of the property, plant and equipment at the Barnwell site was \$2,800,759. According to Bartlett, the value for the Barnwell Operating Rights is \$7,340,000. Under the Company's theory, the Rights will be amortized on a straight-line basis over an eight-year life in the amount of \$917, 500. The 8-year period is consistent with the same period for the valuation of the Barnwell Operating Rights, according to Bartlett.

Bartlett explained the various costs included in the corporate G & A allocation, and the basis of accounting used to develop the methodology for the allocation of the corporate G & A costs to the Barnwell operations. Bartlett also explained the types of costs that are included in the insurance premium cost category, and the methodology used to allocate the insurance costs to the Barnwell operations. Finally, Bartlett explained what

types of cost are included in the calculated fringe cost category and the methodology for the calculation.

William B. House (Tr., Vol. III at 477-535)

William B. House testified for the Company as to the regulatory requirements for the Barnwell facility. First, in 1969, South Carolina entered an agreement with the federal government to control certain radioactive materials for the State. Part of that agreement was the promulgation of state regulations and state law for the control of radioactive materials. Thereafter, the South Carolina Department of Health and Environmental Control, the agency responsible for RAD materials, issued a license to Chem-Nuclear. The license initially authorized receipt and storage of low-level radioactive waste at Barnwell. After extensive geohydrologic studies of the property, the license was amended to include the authority for disposal of radioactive waste. The license has been amended 48 times since it was originally issued, and renewed six times to update the conditions, and also to extend the expiration date of the license.

In 1995, state law and DHEC regulation changes prompted a significant amendment to the license. The amendment added requirements for the disposal of all classes of radioactive waste in concrete vaults and also the addition of enhanced caps over all disposal areas. Starting in 1996, according to House, Chem-Nuclear has buried the waste in DHEC-approved vaults. These vaults are designed to improve the long-term trench stability, and also to provide a certain package stability for the buried packages. Large components are allowed to be disposed outside of vaults, after structure analysis.

Other federal and state regulations apply to the site as well, according to House, including OSHA requirements, storm water pollution prevention regulations, air quality and hazardous waste regulations. Further, the regulatory affairs division of Chem-Nuclear separately provides direct services and compliance oversight. The functions of this division include radiation protection, trench qualification, construction management, environmental monitoring, waste approvals and acceptance, license and permit maintenance, health and safety support, and quality assurance verification and oversight.

Joel Lourie (Tr., Vol. III at 548-575)

The Budget and Control Board presented the testimony of Representative Joel Lourie. Representative Lourie described the goals of the Nuclear Waste Task Force, which began work in the summer of 1999. Also described were the difficulties in obtaining the cost associated with the operation of the site. Representative Lourie noted that as the result of the work of the task force, the legislation was passed that allows South Carolina to enter into the Atlantic Compact and requires the Commission to review the allowable costs of Chem-Nuclear's operation of the Barnwell site. Representative Lourie also affirmed his understanding that Chem-Nuclear, under the legislation, will receive a margin of 29 cents on each dollar of allowable costs.

Thomas D. Pietras (Tr., Vol. III at 576-610)

Thomas D. Pietras, a Certified Public Accountant, appeared on behalf of the Board and the Atlantic Compact Commission. Pietras discussed certain costs in Chem-Nuclear's Application that he considered unallowable under the enabling legislation. Pietras stated that the allowable costs in Chem-Nuclear's application should be reduced

by at least \$5,139,000. Pietras stated a belief that allowable costs are only those costs that are necessary and directly related to the disposal operation at the Barnwell facility. However, after Chem-Nuclear's amendment to its Application, Pietras stated that there are three issues subject to question: Barnwell Operating Rights, insurance, and the G & A allocations from Duratek.

First, Pietras does not consider amortization of Barnwell Operating Rights to be an allowable cost under the statute. Pietras testified that this represents the financial return that Duratek expects to receive from its purchase of Chem-Nuclear through the 29% operating margin provided for in the relevant statute. Pietras opined that this does not represent a cost of operating Chem-Nuclear's disposal operations in Barnwell. Pietras noted that the State is already paying for these rights through the 29% operating margin. The upshot, according to Pietras, is that Chem-Nuclear is asking the State of South Carolina to pay for Duratek's expected profits from its acquisition of Chem-Nuclear for a second time, plus a 29% margin. The amortization of the intangible asset represents a cost of Duratek's ownership of Chem-Nuclear, not a cost of operating the Barnwell disposal operations, according to Pietras. Further, Pietras noted that just because an adjustment is proper under GAAP does not mean it is allowable under the enabling legislation.

Pietras also noted that if the Operating Rights adjustment is granted, there is the potential that the State of South Carolina could be paying twice for the expertise that Chem-Nuclear says is the foundation of these Operating Rights. Chem-Nuclear is asking that it be paid through the amortization, but at the same time, the State is reimbursing

Chem-Nuclear for these people, and for the expertise they bring to the table. Thus, Pietras believes that there is some “double counting” going on with this adjustment. Further, the Company appears to be double collecting a 29% gross margin: once on the entire adjustment itself, and once on the entire amount of allowable costs.

Second, Pietras addressed insurance issues. He stated that most of the increase in insurance is because of new insurance policies that Duratek bought as a prerequisite for the purchase. This is therefore a purchase-related expense, not an expense directly related to disposal operations, according to Pietras, who therefore believes that the expense should be disallowed.

Third, Pietras discussed the issue of corporate allocations. The first problem Pietras pointed out is the question of whether the allocations directly relate to the disposal operations of Chem-Nuclear. Pietras pointed out what he believed to be inappropriate allocations such as investor relations, charitable contributions, marketing, and parties. Without proof that these and other corporate allocations directly relate to the disposal operations of the Company, Pietras stated a belief that the allocations should be disallowed.

Barry Bede (Tr., Vol. III-IV at 611-843)

Barry Bede, President of Bede Environmental, testified for the Board. Bede’s main topic of testimony was his opinion on the cost to operate the Barnwell facility. Bede stated a belief that Chem-Nuclear’s Application seeks excessive allowable costs. In his opinion, the Barnwell site can be safely operated on no more than \$6.8 million in allowable costs. In order to reach that conclusion, Bede noted that he spent numerous

hours in discussion with Chem-Nuclear management and operational staff at the Barnwell facility. He attended or reviewed all depositions taken in the case. Bede also reviewed Barnwell licenses, operating procedures, statutes and regulations, and other applicable documents.

Bede identified the major cost components in operating a low level nuclear waste facility as materials, labor, equipment and corporate overhead, all of which, in Bede's opinion, make up 80% of the total cost of operation. Bede compared Barnwell's disposal operations costs to the operating costs of the Richland, Washington and the Beatty, Nevada sites. Bede attempted to point out relevant similarities and differences between the Barnwell and Richland sites. Bede noted that the Richland site operates under a \$5.6 million annual revenue requirement that includes operating costs of approximately \$4.3 million. Bede opined that the cost analyses applied to the Richland site can be applied to the Barnwell site. He further stated a belief that the cost causers are similar at both sites. Bede opined that the Barnwell site could operate with fewer personnel and less equipment. Bede concluded by stating that Barnwell's least cost operation amount is \$6.8 million.

Andrea C. Crane (Tr., Vol. III at 292-381)

The Consumer Advocate presented the testimony of Andrea C. Crane, Vice-President of The Columbia Group, Inc., a financial consulting firm that specializes in utility matters. Crane's conclusions and recommendations are as follows:

1. Chem-Nuclear has total allowable costs of \$10,156,819.

2. The Company has total allowable direct costs of \$5,120,760, which is a reduction of \$2,245,347 from the direct costs claimed by Chem-Nuclear.

3. The Commission should disallow or reduce the direct costs claimed by the Company in the following areas: vault costs, non-exempt labor, equipment, materials, contract services, other direct costs, calculated fringe, project costs, trench amortization, and goodwill.

4. The Company has total allowable indirect costs of \$3,428,569, which reflects a reduction of \$2,742,566 from the indirect costs claimed by the Company.

5. The Commission should disallow or reduce certain indirect costs claimed by the Company in the following areas: performance incentive, bonus, allowable fringe, travel, employee costs, office supplies and expense, depreciation, and management fees.

6. The Commission should reduce the disposal taxes claimed by the Company from \$1,064,000 to \$805,000, resulting in total allowable other costs of \$1,607,490.

Though Crane differed with the Commission Staff's adjustments on office supplies, management fees, and variable costs, Crane stated that she would not be opposed to the Commission adopting the amounts recommended by the Commission Staff (Tr., Vol. III at 338), though the Consumer Advocate's Brief still takes issue with the Staff's position on management fees and variable costs. (See Brief of Consumer Advocate at 16.)

Henry J. Porter (Tr., Vol. III at 536-547)

Henry J. Porter, Assistant Director, Division of Waste Management, Bureau of Land and Waste Management, South Carolina Department of Health and Environmental Control testified about his duties and experience with the Barnwell site. Porter also discussed the licensing aspects of the site, and the decommissioning and long-term care funds.

William P. Blume (Tr., Vol. IV at 844-957)

William P. Blume, a Certified Public Accountant, testified for the Commission Staff. Blume and his staff performed a review of Chem-Nuclear's Application, as well as its supporting books and records. The initial steps of the review included the determination of accuracy of the Company's per book numbers as shown in the Company's Application. Next, Blume and his Staff tested the Applicant's general ledger in order to make a determination of the adequacy of the Applicant's accounting system to collect and report transactions. Staff was also instructed to make a decision as to the adequacy of the Applicant's Chart of Accounts. Finally, Blume and his Staff reviewed the adjustments that were a part of the Applicant's filing for allowable costs to eliminate any and all expenses that would normally be considered non-allowable for ratemaking purposes. Once these steps were completed, a report with accounting and pro-forma adjustments would be developed for the purposes of reporting to the Commission the financial results of the Staff's review. The report, along with the accounting and pro-forma adjustments was attached to Blume's testimony.

Blume concluded that the present accounting system used by the Company reports its financial transactions adequately, and that the Company's Chart of Accounts is adequate for the purpose for which it was designed. Blume further noted that the Staff's review indicated that the Applicant had, for the most part, used a budget approach in the proposal of accounting and pro-forma adjustments to determine the Company's allowable costs for the fiscal year 2000/2001. Blume pointed out that budgeted numbers are seldom relied upon for the purpose of proposing adjustments, and the Commission has historically relied upon historical data and "known and measurable changes" in determining the adequacy of accepting proposed adjustments for ratemaking. Budgeted numbers have traditionally been disallowed for ratemaking purposes, since these normally do not fit the description of known and measurable numbers. Consequently, the Staff decided to go outside the test year and examine actual monthly operations for the seven month period beginning with July 2000 and going through the end of January 2001. The Staff made use of annualization as its first step to proposing adjustments.

The majority of accounts considered as fixed costs were annualized using the seven months of data. Staff identified two variable costs, which varied according to the amount of low level nuclear waste processed. Staff stated a belief that there were probably variable factors in some of the fixed costs, but that the accounting system provided by Chem-Nuclear would not readily allow identification of the variable components. Therefore, all costs in fixed cost accounts were considered to be fixed. As the result of Staff's audit of the books and records of Chem-Nuclear, the Staff made forty-three accounting and pro-forma adjustments. In summary, based on the review

performed by Blume and his Staff, fixed costs for the purpose of earning an operating margin totaled \$6,105,536. With regard to variable costs, Staff calculated an average cost per cubic foot of received waste to be \$19.90 for vault costs and \$2.41 for trench amortization, totaling \$22.31 per cubic foot. For example on the variable costs, if it is assumed that 101,333 cubic feet of waste are processed, variable costs would total \$2,260,739. Combining this with Staff's fixed costs of \$6,105,536, total allowable costs under this example would be \$8,366,275. Staff emphasized, however, that this would vary with the amount of nuclear waste processed, again, due to the volume and class of waste received.

Blume also calculated the average cost for waste disposal by class. The average per cubic foot vault and amortization cost for a Class A trench was \$21.50. The cost for Class B waste was \$23.52, and for Class C waste, \$44.21. (Tr., Vol. III at 890)

Blume's Operating Rights adjustment was explained in detail by him. Blume noted that this intangible asset represents the right of GTS Duratek to operate the Barnwell facility, and the Company wants to earn an operating margin on the annual amortized amount of it. Such amortization is proposed by the Company to take place over an eight (8) year period. The amount of Operating Rights was calculated by using the present value of the projected future cash flows discounted at 15%. The projections of the Company are based on declining maximum waste volumes to be received over the next eight years and GTS Duratek's reimbursement of costs plus a fixed operating margin of 29%. Blume testified that such an adjustment should not be allowed for the purposes of earning an operating margin. Blume stated that the asset is not a known and measurable

cost. Even though the asset may comply with GAAP principles, Blume noted that the present value of expected future cash flow is not considered as known and measurable for setting a value for ratemaking. The asset does not in itself create revenues. Staff was concerned also over the inclusion of a 29% fixed operating margin. Staff believed that the asset is not used and useful.

Blume compared the intangible asset to an acquisition adjustment. In this case, according to Blume, no acquisition adjustment should be allowed, since the Company is still offering the same service that it did prior to the purchase by GTS Duratek. Staff proposed an adjustment to reduce depreciation accordingly by \$193,499, which included elimination of the Barnwell Operating Rights of \$1,485,971 as originally proposed by the Company, and later revised to \$917,500.

With regard to office supplies and expenses, the Commission Staff noted that the majority of the costs associated with this account were caused by the inclusion by the Company of costs attributed to the Cost Point Accounting System, which has not yet been installed by the Company. Further, the cost is not known and measurable, since the Company used budgeted numbers for its adjustment. Accordingly, Staff proposed elimination of the costs. This resulted in an adjustment of \$139,301, which resulted in allowable costs of \$97,799.

Blume also proposed an annual true-up proceeding for variable costs related to vault costs and trench amortization, since these expenses are dependent on volume and class of waste received.

Robert A. Fjeld (Tr., Vol. IV at 958-1003)

Dr. Robert A. Fjeld, Dempsey Professor of Environmental Engineering and Science at Clemson University, also testified for the Commission Staff. Fjeld testified on three topics: 1) Background information on low-level radioactive waste disposal in the United States; 2) Benchmarks against which the allowable costs recommended by the Staff may be compared; and 3) Recent trends in disposal volumes and the potential implication of these trends on allowable costs.

Fjeld described three classes of low-level radioactive waste-Class A, Class B, and Class C. The classification depends on two factors: 1) the concentration of long-lived radionuclides whose potential hazard will exist long after protective measures have ceased to be effective; and 2) the concentration of short-lived radionuclides for which the protective measures are effective. Class A waste has the lowest levels of radioactivity and poses the least hazard. Class B and C wastes have much higher levels of radioactivity and represent a greater hazard than Class A waste.

Fjeld compared the Commission Staff's recommendation in this case for Barnwell allowable costs to the costs for the Richland, Washington site and to the estimates for a hypothetical low level nuclear waste disposal site in Texas. The Staff recommendation for Barnwell is higher than the Richland costs, which is a reasonable expectation, according to Fjeld. Fjeld also stated that the fixed costs recommended for Barnwell by the Staff are higher than the Texas estimate, and the variable costs recommended by Staff are less than the Texas estimate. Again, according to Fjeld, this is reasonable. Fjeld's

conclusion was that the Staff recommendation for allowable costs at Barnwell appears to be reasonable, based on the comparisons with the Richland costs and the Texas estimate.

Fjeld described a decline in waste volumes at Barnwell in recent years. Fjeld pointed out that, because of this decline, the staffing at Barnwell may have to be addressed sooner than was originally anticipated.

Rebuttal and Surrebuttal Testimony

It should be noted that both rebuttal and surrebuttal testimony were presented by various parties.

III. DISCUSSION

We would note, after all is said and done in this proceeding, that the parties agree on the vast majority of the allowable costs issues. There are, however, some matters which bear further discussion.

The first issue which must be discussed is the matter of Barnwell Operating Rights. At this time, Chem-Nuclear has failed to adequately demonstrate to this Commission that Operating Rights are a known and measurable cost. Tr., Vol. IV, Blume at 876. Chem-Nuclear has failed to provide adequate testimony to convince this Commission that the Operating Rights provide a benefit to the customers of Chem-Nuclear. Id. at 877. We further reject the calculation of Operating Rights, since future cash flows were discounted by 15%, which we consider unrealistic, and the inclusion of an additional 29% fixed operating margin. Id. at 876. There was no evidence in the record that supports the reasonableness of the 15% figure. Further, although Chem-Nuclear's Brief offered to rescind the additional 29% operating margin, the overall testimony of Staff witness Blume convinces us that the adjustment should be rejected, at least at this

time. However, as will be seen infra in this Order, a further hearing will be held with regard to fixed and variable costs later this year. Prior to this hearing, Chem-Nuclear shall submit to this Commission specific information and a categorical breakdown on the items which comprise Operating Rights. During the next hearing this year, this Commission shall re-evaluate whether the proposed Operating Rights provide a direct benefit to the disposal of wastes. If the Commission should find that certain or all of the Operating Rights are allowable, this amount shall be added to the allowable fixed costs for the 2001 fiscal year and beyond.

The second issue has to do with Office Supplies and Expenses. Since the Cost Point Accounting System has never been installed by the Company, we do not believe that the System's expense should be allowed as an allowable cost, since it is not used and useful. We will allow the remaining amount requested under this account, however. Staff's adjustment reduces these costs by \$139,301, resulting in allowable costs of \$97,799. Tr., Vol. IV, Blume at 878-879.

The third issue is in regards to variable costs. Variable costs include accounts for disposal expense and vault cost (#5020) and trench amortization (#5324). Regarding disposal and vault cost, the Staff determined that the disposal costs were dependent upon the class of low-level nuclear waste (Class A, B, or C) and the type of vault used. Tr., Vol. IV, Blume at 887. For trench amortization, the Staff determined that this cost was dependent on the volume and class of waste received, as well as trench construction costs. Id. at 889. After considering the different proposals in this case, we are convinced that variable costs based on the class of waste buried and types of vaults utilized as

suggested by the Staff are appropriate. Staff reviewed vault usage reports supplied by Chem-Nuclear in an effort to identify vault costs and related amortization expense. In the case of Class A waste, Staff identified vault costs varying from \$2,597 for cylindrical vaults to \$5,830 for rectangular vaults. The average resultant per cubic foot vault and amortization cost for a Class A trench was \$21.50. Likewise, the same costs were reviewed for Class B and Class C wastes. Staff calculated a per cubic foot vault and amortization cost of \$23.52 for Class B waste, and \$44.21 for Class C waste. Id. at 889-890. We hereby adopt Staff's amounts to quantify the variable costs. Shown in tabular form, this appears as follows:

Waste Class	Total Allowed Vault and Trench Variable Cost (\$/ft ³)
A	\$21.50
B	\$23.52
C	\$44.21

To calculate the total annual variable costs, Chem-Nuclear shall provide this Commission, on June 30th of each year, with the total volume of waste buried for each waste class for the prior twelve (12) months.

Allocations must also be discussed. The witness for the Budget and Control Board, Thomas Pietras, pointed out what he believed to be inappropriate allocations, such as investor relations, charitable contributions, marketing and parties. The Consumer Advocate's witness and the Board's witness both recommended the removal of the allocation of Tier II costs from the Company's Maryland Office. The Staff reviewed all

allocations to the Company from all sources including Tier II allocations during its audit. The Staff removed any and all inappropriate items that it found during its review of such allocations. Tr., Vol. IV, Blume at 879-885. The Commission adopts Staff's adjustments to remove inappropriate allocations from the amount of recoverable costs, based on the methodology stated by the Staff. Charitable contributions, parties, unallowable marketing and any items in investor relations that were found to be non-allowable were included in the amounts removed by Staff.

Pietras also disallowed the increase in insurance premiums proposed by the Company. Specifically, a disallowance was made for nuclear liability insurance premiums as being part of acquisition costs resulting from the purchase of the Company by Duratek and, therefore, not directly related to disposal operations. The Commission finds that the pollution legal liability policy in question is specific to the Barnwell site and, is, therefore, directly related to disposal operations. The Commission disallows the Board's recommendation, and specifically adopts Staff adjustment 23, found in Hearing Exhibit 16, Audit Exhibit A-1, page 6. We note that this adjustment allows Chem-Nuclear to increase the expenses associated with insurance premiums at its facility, however, as we stated, we believe that this amount is directly related to disposal operations.

This Commission must also consider the Budget and Control Board's Motion to strike portions of the testimony of Chem-Nuclear witness Carol Ann Hurst's testimony. The ground for the motion was that Ms. Hurst lacked personal knowledge of the facts in her testimony. We deny the motion. Clearly, Ms. Hurst has personal knowledge of the

information contained in her testimony and exhibits, due in part to her review and experience with Chem-Nuclear's business records. Further, although Ms. Hurst's testimony and exhibits may be hearsay, they certainly fall under the business records exception to the hearsay rule, and are therefore admissible as evidence in this proceeding. See South Carolina Rule of Evidence 803(6). Again, the motion is denied.

IV. FINDINGS AND CONCLUSIONS

1. The Public Service Commission of South Carolina is authorized and directed by S.C. Code Ann. Section 48-46-40(B) et seq. (Supp. 2000) to identify allowable costs for operating a regional low-level radioactive waste disposal facility in South Carolina. The described facility is located in Barnwell, South Carolina.

2. Chem-Nuclear has operated the disposal site in question continuously since 1971 without interruptions. The site is comprised of approximately 235 acres of property owned by the State of South Carolina and leased by Chem-Nuclear from the Budget and Control Board. Approximately 102 acres of the 235 acres have been used for disposal. Approximately 13 acres remain available for disposal.

3. The Barnwell Operating Rights adjustment proposed by Chem-Nuclear must be rejected. It is not known and measurable, nor does it provide benefit to the Company's customers, as discussed in the testimony of Staff witness Blume. We also reject it for other reasons stated above. However, the matter shall be considered again in the hearing later this year.

4. The witness for the Board, Barry Bede, presented testimony that outlined

significant reductions in allowable disposal costs at the Chem-Nuclear facility. Based on Bede's experience at the low-level disposal site in Washington State, he asserted that the Chem-Nuclear facility could be safely operated on \$6.8 million dollars per year. Further, Hearing Exhibit 14 provides further evidence that additional reductions in allowable costs can be achieved. However, this Commission has chosen not to give weight to Bede's testimony at this time, due to a number of complicating factors in his testimony during the hearing. Bede's curriculum vitae listed a Ph.D degree and one masters degree that he had never completed the requirements for and therefore did not possess. The general observer would have believed that Bede had the degrees, when, in fact, he did not. This point brings into question Bede's credibility.

In any event, we do believe that reductions in fixed and variable costs should result from reductions in the waste stream to the Chem-Nuclear facility. This conclusion is consistent with the testimony of Dr. Robert A. Fjeld. Tr., Vol. IV, Fjeld, at 979. To quantify these future cost reductions, Chem-Nuclear shall provide to the Commission an operations and efficiency plan for the Barnwell facility prepared by an independent, qualified party. The plan shall identify least-cost operating strategies for future years including, but not limited to, personnel requirements for disposal services, and optimal vault and trench configurations for determination of allowable variable costs. (See S.C. Code Ann. Section 48-46-40 (B)(6) (Supp. 2000.) The plan shall include a review and appropriate evaluation of the work conducted by Mr. Bede. Any request for proposal or outline of the proposed plan by Chem-Nuclear shall be submitted to the Commission for approval prior to initiation of any proposed work. The plan shall be completed prior to

June 30, 2002, and the findings and recommendations of the plan shall be reviewed and considered by the Commission in subsequent hearings regarding allowable fixed and variable costs.

5. The Commission Staff's adjustments are adopted in toto. Again, there seems to be an agreement in general on these adjustments, with the exceptions noted and discussed above. The testimony of Dr. Robert A. Fjeld supports the reasonability of Staff's adjustments. We would note with interest that the brief of the Budget and Control Board appears to propose for the first time many of the original adjustments of Consumer Advocate witness Andrea Crane. Again, Ms. Crane stated that the Consumer Advocate would not be opposed to this Commission adopting Staff's adjustments. Tr., Vol. III, Crane, at 338, despite certain arguments to the contrary in the Consumer Advocate's Brief. We therefore reject the position taken by the Brief of the Board.

We hold that Chem-Nuclear's current accounting system accurately reports financial transactions, and that the present chart of accounts should continue to be used by Chem-Nuclear. Tr., Vol. IV, Blume at 4-5. To enable the Commission to adequately track historical accounts, no changes in the current system, such as the proposed change to the Cost Point Accounting System (Tr., Vol. IV, Blume, at 878) should be made without prior approval by the Commission.

6. Since this is the first time that this Commission has ruled on the matter of allowable costs for Chem-Nuclear, we hereby show our calculation of allowable costs as proposed by Staff witness Blume and as adopted by us:

<u>Account #</u>	<u>Description</u>	<u>As Adjusted-\$</u>
	<u>Direct Cost</u>	
5020	Disposal Exp./	
	Vault Cost	0
5030	Inter-Co. Disp.	
	WMI S.E.	0
5111	Exempt Labor	568,353
5112	Non-Exempt Labor	793,116
5312	Temporary Labor	110,926
5119	Overtime Labor	66,110
5132,34,35	Equipment	282,165
5138	Licenses	0
5142,43,45	Materials	72,729
5151	Affiliated Cost	77,505
5152	Contract Cost	132,402
5156	Maintenance Cost	20,374
5157	Laundry Services	8,707
5169	Disposal Taxes	0
5171,72,74	Travel Expenses	9,811
5175	Other Direct Cost	66,158
5301	Analysis-Env	0
5191,92	Fed. Ex. and Postage	703
5249	Calc. Fringe Benefits	476,811
5303,04	R&M Equip. Main.	82,565
5310	Capitalized Cost	-50,445
5317	Project Cost	71,349
5319	Insurance Prem.	446,463
5324	Trench Amor.	0
5326	Other Taxes	0
5832	Site Labor Allo.	-71,686
5401	Goodwill	0
	<u>Total Direct Cost</u>	<u>3,164,114</u>

<u>Account #</u>	<u>Description</u>	<u>As Adjusted-\$</u>
	<u>Indirect Cost</u>	
6111	Exempt Labor	621,751
6114	Perform. Incen.	0
6112	Non-Exempt Labor	203,323
6117	Labor Allocation	-134,950

<u>Account #</u>	<u>Description</u>	<u>As Adjusted-\$</u>
6149	Calc. Fringe Ben.	-487,809
6118	Bonus	0
6119	Overtime Labor	1,215
6120	Allowable Fringe	809,406
7100	Travel Expenses	65,417
7200	Employee Cost	56,664
7300	Office Supplies	
	& Expenses	97,799
7400	Building & Util.	121,558
7500	Services	209,770
7600	Equipment	87,624
7700	Depreciation	457,444
7904	Management Fees/ General & Admin.	<u>832,210</u>

<u>Total Indirect Cost</u>	<u>2,941,422</u>
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<u>Total Direct and Indirect Cost</u>	<u>6,105,536</u>
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Allowable Variable Cost:

<u>Waste Class</u>	<u>Total Allowed Vault and Trench Variable Cost</u> <u>(\$/ft³)</u>
A	\$21.50
B	\$23.52
C	\$44.21

7. Accordingly, we approve the sum of \$6,105,536 in fixed costs, and variable rates as listed above, based on class of waste. The actual expense will be dependent on the actual volume and class of waste received. We believe that these numbers are appropriately documented in the Staff testimony and exhibits and are hereby adopted as reflecting the true allowable cost for Chem-Nuclear to operate the Barnwell disposal facility.

8. Because of the difficulty in forecasting the various combinations of vaults and trenches used for disposal, a hearing shall be required each year to adjust (true-up) these variable costs of Chem-Nuclear. The annual hearing shall be held as soon as can be scheduled following submittal of the year-end data by Chem-Nuclear to the Commission. To facilitate preparation of the hearing, Chem-Nuclear shall submit monthly reports to the Commission of variable cost data. In addition, the Commission shall conduct an in-depth study of Chem-Nuclear revenue streams to insure that allowable costs are not being offset by outside revenue sources.

The hearing shall serve two purposes. First, a true-up shall be made to the variable costs from the prior fiscal year. Any overage or underage in variable costs from the prior fiscal year shall be quantified, and the account balance reconciled in the fiscal year of the hearing. This mechanism would be modeled after Purchased Gas Adjustment (PGA) hearings presently conducted by the Commission. Tr., Vol. IV, Blume, at 888. Second, due to the future mandated reduction in low-level nuclear waste shipments per the statute, the Commission shall also conduct its review of any changes to the allowable fixed operating costs of the Chem-Nuclear facility, and make any required changes to the fixed costs. The findings of the fixed costs review will be the approved fixed cost for the fiscal year of the hearing.

JUNE 1, 2001

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9. This Order shall remain in full force and effect until further Order of the Commission.

BY ORDER OF THE COMMISSION:

Chairman

ATTEST:

Executive Director
(SEAL)